

Course Syllabus

Advanced Test and Evaluation Course 301 (TST 301)



**Defense Acquisition University
Naval Center for Acquisition Training
Monterey, CA**

November 1999

COURSE SYLLABUS

COURSE TITLE: Advanced Test and Evaluation Course

COURSE NUMBER: TST-301

COURSE DIRECTOR: MR. Edward C. Buntz, (805) 472-2870

COURSE OFFERERS:

Naval Center for Acquisition Training, Monterey, CA
Defense Systems Management College, Fort Belvoir, VA.

COURSE LENGTH: 1 week (5 days), 32 classroom contact hours; approximately 16 hours of pre-work required prior to attending class.

CLASS SIZE: 25 maximum

FIRST OFFERING: July 1999

COURSE OVERVIEW

Test and Evaluation Course 301 provides an executive level, learner centered, training environment for Level III certification of Department of Defense (DoD) T&E professionals. The course is comprised of limited instructor based lectures to review the Test 202 technical material and to introduce significant current T&E events. Student generated issues are used for a Video Teleconference (VTC) with Office of the Secretary of Defense (OSD) officials. Student generated technology topics; personal wisdom gained, and unresolved challenges form the foundation for group and classroom discussion and presentations.

Course Objectives. After completion of TST 301, students will be able to:

- Apply technology, like the Internet, to obtain pertinent T&E information easily.
- Demonstrate an understanding of and impact on T&E in the following areas: Acquisition Reform, Defense Reform Initiative, Joint Vision 2010; and familiarity with the DOTE Annual Report, Simulation Based Acquisition, and Open Systems Architecture.
- Apply experience to generate OSD level issues and be able to discuss these issues with OSD officials and assess the impact on current T&E programs.
- Research, obtain, prepare and present newly emerging T&E technology topics.
- Assess the impact of the Press, General Accounting Office, Congress and OSD officials on their individual ethics and integrity standards for their T&E programs.
- Review and analyze real world executive level T&E challenges and to present risk mitigation options.
- Apply T&E related wisdom based on past and current experience in a constructive manner for use by other executive level personnel.

OVERVIEW OF CHANGES

In December 1998, the Test and Evaluation Functional Board and Defense Acquisition University committed to a total update of the Test 301 course. Existing competencies and course structure contained too much redundancy with the Intermediate Test and Evaluation 202 course. The intent was to change from a lecture/discussion based approach to a learner centered, creative problem solving approach. Facilitated learning methodology using individual and group exercises with assessment is the new description for the course. Although the resident portion of the course is conducted in five days, there is a significant amount of student pre-work (estimated at 16 hours) required. The pre-work assignments provide the foundation for all the group activities and must be submitted for assessment prior to arrival in the resident portion of the class. A two hour video teleconference with Director of Operational Test and Evaluation (DOT&E) and Deputy Director for Developmental Test and Evaluation remains the capstone event for the course and is conducted with the use of student generated issues and questions. The Functional Board provided the following 14 areas of concentration for the new Test 301 course:

- System of Systems/Interoperability testing
- Modeling & Simulation (M&S)
- Software testing
- Joint Technical Architecture
- Commercial Off the Shelf (COTS) testing
- Contractor testing
- Combined developmental and operational testing
- Combined test teams/Integrated test teams
- Combining testing with training and field exercises
- Live Fire Test and Evaluation (LFT&E)
- Advanced Concept Technology Demonstration (ACTD)
- Cycle time reduction initiatives
- Major Range and Test Facility Base (MRTFB)
- DT/OT reorganization in OSD

PRIMARY COURSE TEXTS

Instructional materials include PowerPoint presentations with instructor notes and videotapes, however, the student pre-work assignments provides the essential elements for most of the course. Students are provided copies of all instructor presentations and are given the opportunity to copy other student/group presentations for personal use and future reference.

INSTRUCTIONAL METHOD

Number of hours employed in the various instructional methods include:

<u>Type</u>	<u>Hours</u>	<u>Notes</u>
Student Pre work	16.0	Completed/assessed prior to class
Lecture/discussion	7.0	Introduction, Current, Overview, M&S, S/W
Video/follow-on discussion	2.0	T&E Ethics
Video Teleconference (VTC)	3.0	VTC/discussion
Group discussions/presentations	18.0	OSD Issues, Technology, T&E Issues, Test Design, Wisdom
Guest speaker	1.5	
Course review/graduation	<u>0.5</u>	
	48.0	

Student pre-work must be completed and assessed by the instructors prior to the start of resident class. Additional instructor time is required to download and assess the pre-work.

Throughout the course, instructors facilitate discussions and presentations, drawing from the students' personal experiences, the instructor's experiences and current events. It is course policy that students must not attribute the experiences described by others to the specific person or agency. This assures the students, the OSD representatives, and any guest lecturers that they can discuss both the positive and negative aspects of test and evaluation that they have encountered.

COURSE PREREQUISITES

TST 301 is mandatory for Level III certification for the Test and Evaluation career field. Intermediate Test and Evaluation (TST 202) and Acquisition 201 (ACQ 201) are the course prerequisites.

COURSE PREPARATION

A self-administered exam with automatic grading must be taken by accessing the course web site. Students assess their own preparedness for the course after taking the exam and downloading the pre-work assignments. There is an estimated 16 hours of pre-work required of each student in order to complete the exam, assess their readiness to take the resident portion of the class and to conduct research and prepare presentations for use during class. Instructors also must complete their pre-work assessments to ensure students are ready to attend the resident portion of the class. Instructors also use the pre-work assignments to arrange student groups by topics for the T&E Issues module.

STUDENT ASSESSMENTS

Student assessments are based on the individual research prepared by the students prior to attending class, student participation in their individual group discussions, student participation in overall class discussions and student presentations shared with the entire class.

1. Students are required to read the Test 301 web site prior to attending class and complete several pre work assignments:
 - Complete two questions/issues appropriate for discussion during the video teleconference with OSD representatives.
 - Research T&E technologies, select an applicable topic, and prepare a five-minute presentation.
 - Select and prepare a five-minute presentation on an unresolved executive level T&E issue from personal experience.
 - Select and prepare a five-minute presentation on two lessons learned from their personal T&E experience.
2. Students must complete all pre work assignments; they must actively participate in all group discussions, and must present at least one group selected topic to the entire class in order to pass the course.

LESSON DESCRIPTIONS

Lesson assignment sheets are prepared for each lesson.

<u>Lesson Title</u>	<u>Hours</u>
1. Course Pre-work Assignments	16 total
A. (Study web site/complete self administered exam)	(4)
B. Issues for OSD	(2)
C. T&E Technology	(4)
D. T&E Issues	(3)
E. T&E Wisdom	(3)
2. Introduction and Administration	2
3. Current Events	2
4. T&E Overview	2
5. Issues for OSD	3
6. T&E Technology	3
7. T&E Ethics	2
8. T&E Issues	4
9. Test Design	3
10. T&E Wisdom	4
11. OSD Video Teleconference (VTC)	2
12. VTC Review	1
13. Guest Speaker	1.5
14. Software Testing	1
15. M&S	1
16. Course Review and Graduation	0.5
Total	48 hours
Note: Instructor assessment of student pre-work is required prior to the start of resident class. There can be up to 25 students per class, and they each must submit 4 assignments. This creates a significant instructor time requirement several weeks prior to the start of each resident class.	